Green Stormwater Infrastructure:

Program Update

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Overview

The Basics

- Seattle Stormwater Challenges
- Green Infrastructure Tools, What and Why
- Evolution of Green Infrastructure in Seattle

GSI Program Update

- Policy + Program Development
- Capital Improvement Projects
- Partnerships

Stormwater Challenges

Too Much Runoff…

…causes flooding, sewer back-ups, and sewer overflows

Too Much Pollution

…damages our creeks, lakes, and Puget Sound

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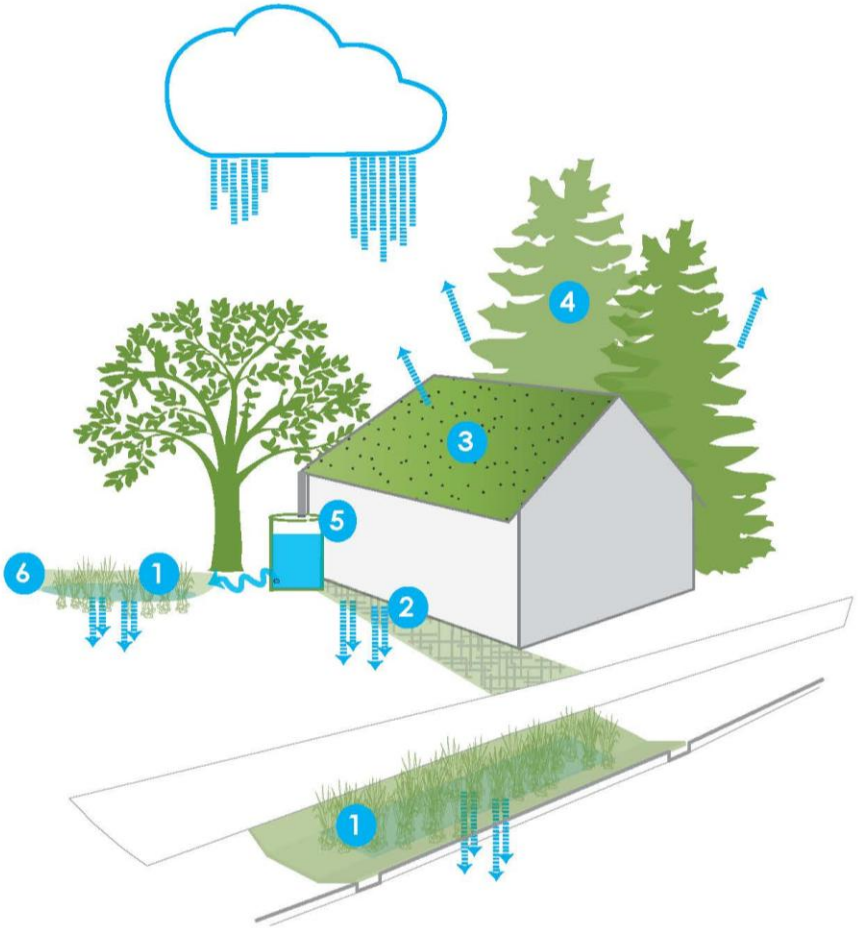
What is GSI ?

1. bioretention (like rain gardens)
2. permeable/porous pavement
3. green roofs
4. urban canopy cover
5. rainwater harvesting (like cisterns)
6. soil building (like mulch + compost)
7. biofiltration



Why Use GSI?

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GSI Program History (capital projects)

1 2000 SEA Streets

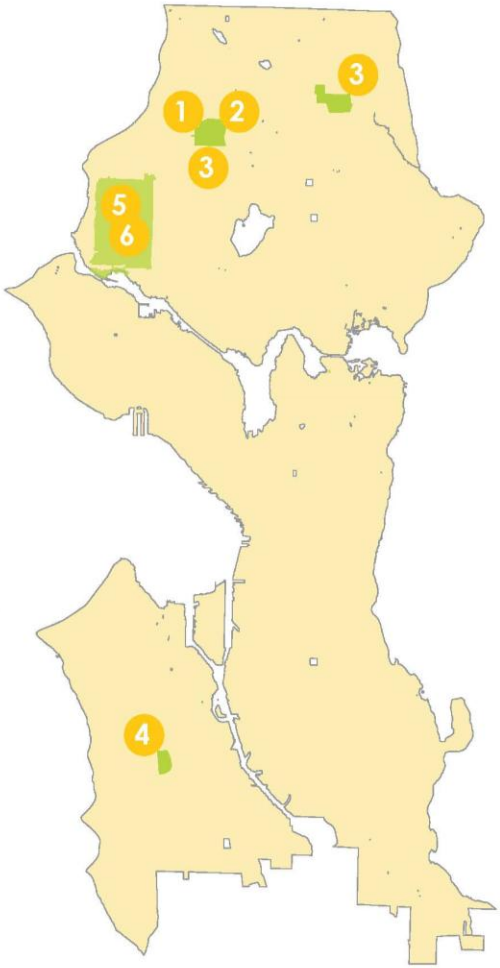
First full right-of-way GSI improvement in the U.S. achieved a 99% drop in runoff volume

2 2003 Carkeek Cascade

Post-construction monitoring showed 90% reduction in pollutants like lead, copper, and zinc

3 2004 & 2006 Green Grids

Neighborhood-wide projects in Pinehurst and Broadview show proof of concept at larger scale



4 2005-2009 Highpoint

Neighborhood redevelopment project in collaboration with Seattle Housing Authority and Washington Dept. of Ecology

5 2010 RainWise Pilot

Incentive program provides rebates to property owners who install on-site rain gardens or stormwater cisterns

6 2011 Ballard CSO Pilot

Roadside GSI project designed to reduce combined sewer overflows into Salmon Bay

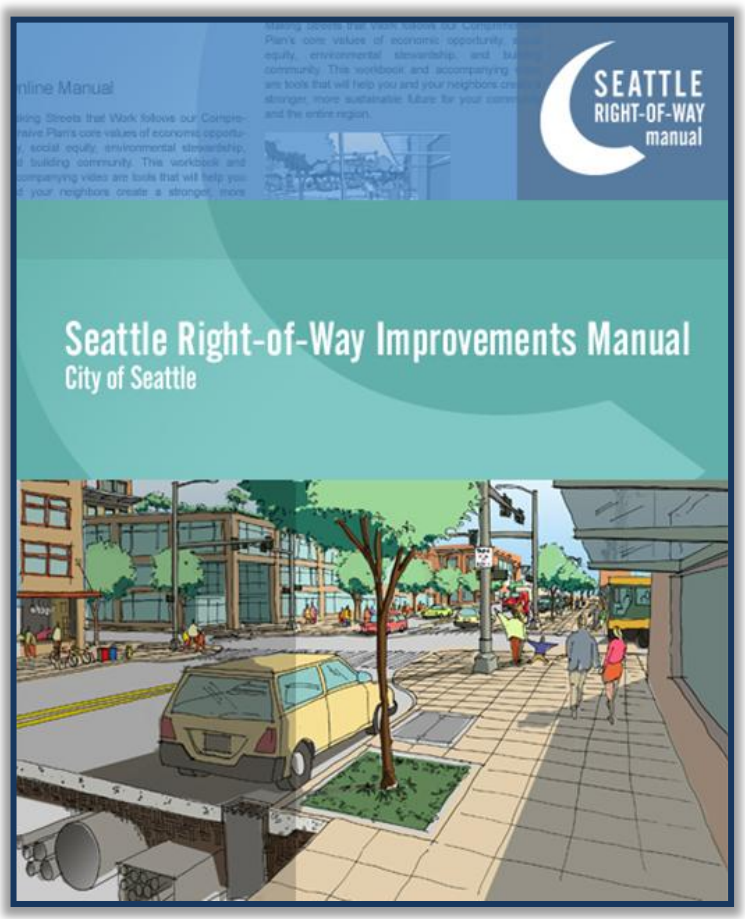
GSI Projects' Primary Driver

Project	Water Quality	Flow *
SEA Street #1		✔ (2-year)
Carkeek Cascade @ 110th	✔	maximize
Broadview Green Grid		✔ (1-2 year)
Pinehurst Green Grid		✔ (1-2 year)
High Point	✔	✔ Delay (6-month storm)
Thornton Creek Water Quality Project (primary bioFILTRATION)	✔	
Ballard Roadside Rain Gardens		✔ (1 year)
Swale on Yale (primary bioFILTRATION)	✔	

* Systems designed for flow control also achieve water quality targets

GSI Program History (policy)

2009 Stormwater Code:
GSI to the 'maximum extent feasible'



Right-of-Way Improvement Manual
Guidance chapter for GSI practices in ROW

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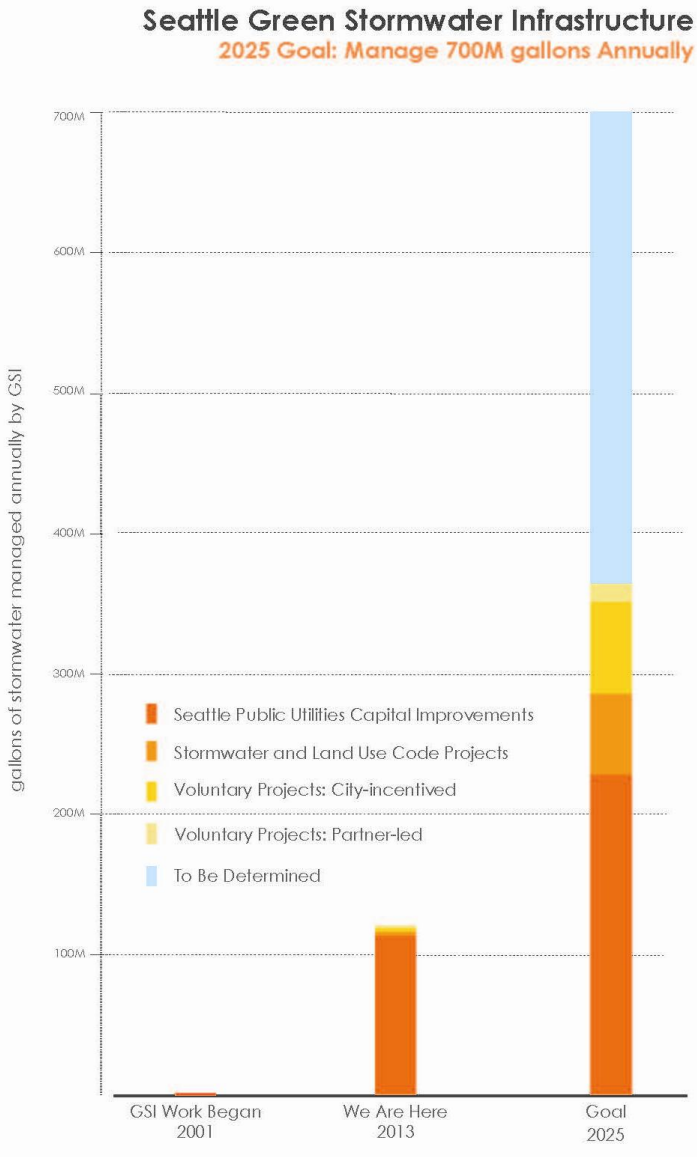
Policy + Program Development



In July 2013, City Council unanimously passed Resolution 31549:

- GSI should be relied upon to manage stormwater wherever possible
- Target to manage 700MG annually with GSI by 2025
- City Departments shall collaborate with OSE to produce Implementation Strategy for meeting new target

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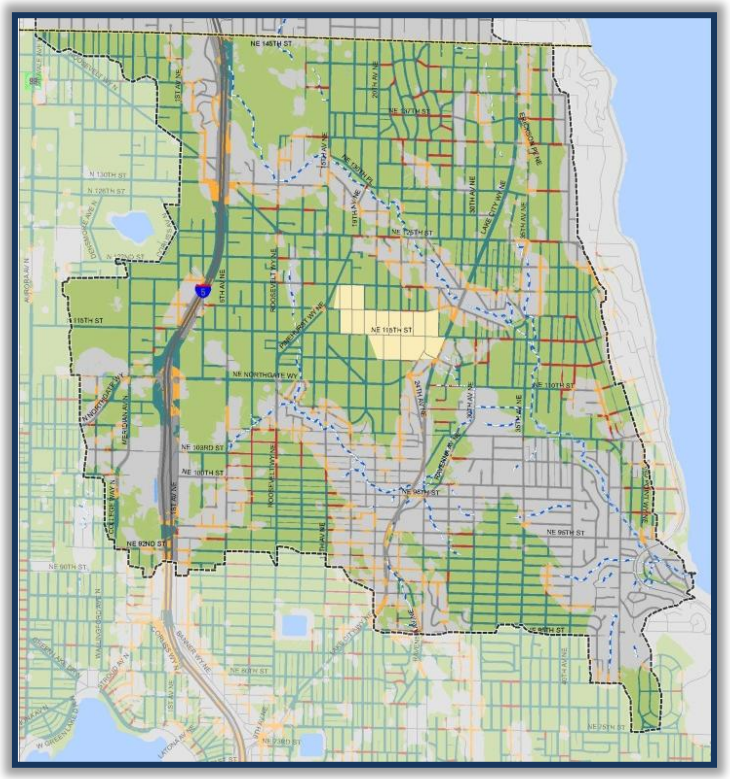
Policy + Program Development



Integrated Plan

Developed neighborhood-driven GSI partnering option for EPA submittal.

GSI Manuals Developed

CIP Project procedural expectations, for technical design and community engagement

Pre-Vetted Concepts

SDOT, SPU & DPD

multidisciplinary team

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Policy + Program Development

Stormwater Code

Updating on-site stormwater management requirements

LID code integration

Review and update land-use codes

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Public Rights-of-Way Retrofits Completing Options Analysis

Ballard Natural Drainage

Delridge Natural Drainage and Neighborhood Greenway

Both slated for construction in 2015

Public Rights-of-Way Retrofits in Design or Construction

Capital Hill Water Quality Project (Swale on Yale)

Venema NDS

Will complete design 3Q 2014

KCWTD's Barton Project

Starting construction 1Q 2014

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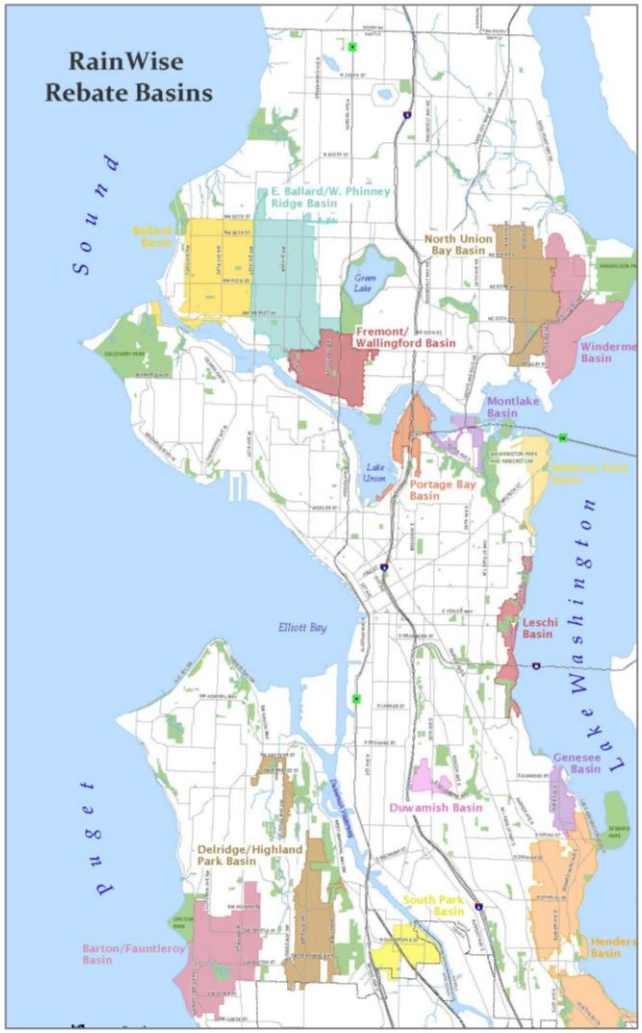
Partnerships



Joint GSI program management with King County

RainWise Expansion

40,000 households now eligible

Developing options to increase access and equity

Development Incentives

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GSI 2025 Implementation Strategy

Development Milestones

Key Milestones (Winter/Spring 2014)

December:	Confirm 2013 baseline
Jan-Feb.	Define trajectory under "business as usual" City investment level; Draft potential investment paths (medium and high)
Late Feb.:	Define/refine medium + high possible City investment paths (through 2020) -- capital departments workshop (mid-late Feb.)
Early March:	Executive briefing/s: potential CIty investment paths and recommended alternative
Late March:	Early Mayors Office/Council briefings and request for feedback
April:	Revisions + follow-up executive briefings (late April)
Early May:	Public Comment Period (on full draft strategy)
June:	Delivery to Council

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Questions?

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